

***CORYNEBACTERIUM GLUTAMICUM* GENES ENCODING PROTEINS  
INVOLVED IN CARBON METABOLISM AND ENERGY PRODUCTION**

**Abstract of the Disclosure**

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Isolated nucleic acid molecules, designated SMP nucleic acid molecules, which  
encode novel SMP proteins from *Corynebacterium glutamicum* are described. The  
invention also provides antisense nucleic acid molecules, recombinant expression  
vectors containing SMP nucleic acid molecules, and host cells into which the expression  
10 vectors have been introduced. The invention still further provides isolated SMP  
proteins, mutated SMP proteins, fusion proteins, antigenic peptides and methods for the  
improvement of production of a desired compound from *C. glutamicum* based on  
genetic engineering of SMP genes in this organism.